IN THE CLAIMS:

Please AMEND claims 1 and 15, and ADD new claims 25-33, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1. (Currently Amended) A laser oscillation apparatus comprising:

wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value; ~~and~~

calculation means for calculating a ~~driving amount of the wavelength selection element on the basis of the target value, and a~~ drift amount of the oscillation wavelength generated immediately after oscillation ~~starts,~~ starts; and

~~wherein said wavelength change means drives~~ a controller for driving the wavelength selection element by said wavelength change means on the basis of the calculated ~~driving amount and the calculated~~ drift amount.

2. (Canceled)

3. (Previously Presented) The apparatus according to claim 1, wherein said calculation means calculates the drift amount on the basis of at least one of an oscillation wavelength change amount of the laser beam, an oscillation idle time of the laser beam, and an oscillation duty.

4. (Original) The apparatus according to Claim 1, wherein thresholds are set for the oscillation wavelength change amount of the laser beam and the oscillation idle time of the laser beam, whether the oscillation wavelength change amount of the laser beam or the oscillation idle time of the laser beam exceeds the threshold is determined, and a wavelength lock signal is output based on a determination result.

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5. (Original) The apparatus according to claim 4, wherein a shutter is closed when the oscillation wavelength change amount of the laser beam or the oscillation idle time of the laser beam exceeds the threshold.

6. (Original) The apparatus according to claim 1, further comprising wavelength measurement means for measuring the oscillation wavelength of the laser beam.

7. (Original) The apparatus according to claim 6, wherein

the apparatus further comprises internal environment measurement means for measuring an internal environment of said wavelength measurement means, and

said wavelength measurement means is corrected based on the measured internal environment of said wavelength measurement means.

8. (Previously Presented) The apparatus according to claim 7, wherein the internal environment of said wavelength measurement means includes at least one of a temperature and an atmospheric pressure.

9. (Original) The apparatus according to claim 6, wherein whether the measured oscillation wavelength of the laser beam falls within a predetermined allowable range is determined, and a wavelength lock signal is output based on a determination result.

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10. (Original) The apparatus according to claim 9, wherein output of the laser beam is stopped when the oscillation wavelength of the laser beam does not fall within the predetermined allowable range.

11. (Original) The apparatus according to claim 1, wherein output of the laser beam is not stopped in changing the oscillation wavelength of the laser beam.

12. (Original) The apparatus according to claim 1, wherein no test laser beam is emitted in changing the oscillation wavelength of the laser beam.

13. (Previously Presented) The apparatus according to claim 1, wherein the wavelength selection element includes one of a grating and an etalon.

14. (Original) The apparatus according to claim 1, wherein the laser beam includes an excimer laser beam.

15. (Currently Amended) An exposure apparatus using a laser oscillation apparatus as a light source, wherein the laser oscillation apparatus comprises:

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wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value; ~~and~~

calculation means for calculating a ~~driving amount of the wavelength selection element on the basis of the target value, and a~~ drift amount of the oscillation wavelength generated immediately after oscillation ~~starts,~~ starts; and

~~wherein said wavelength change means drives~~ a controller for driving the wavelength selection element by said wavelength change means on the basis of the calculated ~~driving amount and the calculated~~ drift amount.

16. (Previously Presented) The apparatus according to claim 15, wherein the oscillation wavelength of the laser beam is changed between an end of exposure in a predetermined exposure region on a substrate to be exposed and a start of exposure in a next exposure region.

17. (Withdrawn) A semiconductor device manufacturing method of manufacturing a semiconductor device by using an exposure apparatus, said method comprising the steps of:

applying a resist to a substrate;

drawing a pattern on the substrate by using the exposure apparatus; and

developing the substrate,

wherein the exposure apparatus uses as a light source a laser oscillation apparatus including:

wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value; and

calculation means for calculating a driving amount of the wavelength selection element on the basis of the target value, and a drift amount of the oscillation wavelength generated immediately after oscillation starts,

wherein said wavelength change means drives the wavelength selection element on the basis of the calculated driving amount and the calculated drift amount.

18. (Withdrawn) A semiconductor device manufacturing method comprising the steps of:

installing manufacturing apparatuses for performing various processes, including an exposure apparatus, in a semiconductor manufacturing factory; and

manufacturing a semiconductor device by using the manufacturing apparatuses in a plurality of processes,

wherein the exposure apparatus uses as a light source a laser oscillation apparatus including:

wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value, and

calculation means for calculating a driving amount of the wavelength selection element on the basis of the target value, and a drift amount of the oscillation wavelength generated immediately after oscillation starts,

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wherein said wavelength change means drives the wavelength selection element on the basis of the calculated driving amount and the calculated drift amount.

19. (Withdrawn) The method according to claim 18, further comprising the steps of:

connecting the manufacturing apparatuses by a local area network; and

communicating information about at least one of the manufacturing apparatuses between the local area network and an external network outside the semiconductor manufacturing factory.

20. (Withdrawn) The method according to claim 19, further comprising performing one of (i) accessing a database provided by a vendor or user of the exposure apparatus via the external network to obtain maintenance information of the manufacturing apparatus by data communication, and (ii) performing production management by data communication between the

semiconductor manufacturing factory and another semiconductor factory via the external network.

21. (Withdrawn) A semiconductor manufacturing factory comprising:

manufacturing apparatuses, including an exposure apparatus, for performing various processes;

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a local area network for connecting said manufacturing apparatuses; and

a gateway which allows the local area network to access an external network outside the factory,

wherein information about at least one of said manufacturing apparatuses can be communicated, and

said exposure apparatus uses as a light source a laser oscillation apparatus including:

wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value, and

calculation means for calculating a driving amount of the wavelength selection element on the basis of the target value, and a drift amount of the oscillation wavelength generated immediately after oscillation starts,

wherein said wavelength change means drives the wavelength selection element on the basis of the calculated driving amount and the calculated drift amount.

22. (Withdrawn) A maintenance method for an exposure apparatus installed in a semiconductor manufacturing factory, said method comprising the steps of:

causing a vendor or user of the exposure apparatus to provide a maintenance database connected to an external network of the semiconductor manufacturing factory;

authorizing access from the semiconductor manufacturing factory to the maintenance database via the external network; and

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transmitting maintenance information accumulated in the maintenance database to the semiconductor manufacturing factory via the external network,

wherein the exposure apparatus uses as a light source a laser oscillation apparatus including:

wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value, and

calculation means for calculating a driving amount of the wavelength selection element on the basis of the target value, and a drift amount of the oscillation wavelength generated immediately after oscillation starts,

wherein said wavelength change means drives the wavelength selection element on the basis of the calculated driving amount and the calculated drift amount.

23. (Previously Presented) The apparatus according to claim 15, wherein

the exposure apparatus further comprises a display, a network interface, and a computer network for executing network software, and

maintenance information of the exposure apparatus can be communicated via the computer network.

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24. (Previously Presented) The apparatus according to claim 23, wherein the network software is connected to an external network of a factory where the exposure apparatus is installed, provides on said display a user interface for accessing a maintenance database provided by a vendor or user of the exposure apparatus, and enables obtaining information from the database via the external network.

25. (New) The apparatus according to claim 1, further comprising calculation means for calculating a drive amount of the wavelength section element on the basis of the target value,

wherein said controller drives the wavelength selection element by said wavelength change means on the basis of the calculated driving amount and the calculated drift amount.

26. (New) A laser oscillation apparatus comprising:

a monitor for monitoring a wavelength of a laser beam;

a driver for driving a wavelength selection element and changing an oscillation wavelength of the laser beam to a target value; and

a controller for determining whether a difference between the wavelength and the target value exceeds a predetermined value,

wherein when the difference does not exceed the predetermined value, said controller drives the wavelength selection element by said driver so as to have the oscillation wavelength be the target value, and causes said driver to oscillate the laser beam without emitting a test laser beam to output the laser beam externally of the apparatus.

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27. (New) A laser oscillation apparatus comprising:

a driver for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value; and

a controller for determining whether an idle time for stopping an oscillation exceeds a predetermined value,

wherein when the idle time does not exceed the predetermined value, said controller drives the wavelength selection element by said driver so as to have the oscillation wavelength be the target value, and causes said driver to oscillate the laser beam without emitting a test laser beam to output the laser beam externally of the apparatus.

28. (New) An exposure apparatus for exposing a substrate with a laser beam from a laser oscillation apparatus, said exposure apparatus comprising:

a monitor for monitoring a wavelength of the laser beam;

a driver for driving a wavelength selection element and changing an oscillation wavelength of the laser oscillation apparatus to a target value; and

a controller for determining whether a difference between the wavelength of the laser beam and the target value exceeds a predetermined value,

wherein when the difference does not exceed the predetermined value, said controller drives the wavelength section element by said driver so as to have the oscillation wavelength be the target value, and causes said laser oscillation apparatus to oscillate the laser beam without emitting a test laser beam to expose the substrate with the laser beam.

29. (New) An exposure apparatus for exposing a substrate with a laser beam from a laser oscillation apparatus, said exposure apparatus comprising:

a driver for driving a wavelength selection element and changing an oscillation wavelength of the laser oscillation apparatus to a target value; and

a controller for determining whether an idle time for stopping an oscillation exceeds a predetermined value,

wherein when the idle time does not exceed the predetermined value, said controller drives the wavelength selection element by said driver so as to have the oscillation

wavelength be the target value, and causes said laser oscillation apparatus to oscillate the laser beam without emitting a test laser beam to expose the substrate with the laser beam.

30. (New) A method of controlling a laser oscillation apparatus, said method comprising:

a monitoring step of monitoring a wavelength of a laser beam;

a decision step of deciding a target value of an oscillation wavelength;

a determination step of determining whether a difference between the wavelength and the target value exceeds a predetermined value; and

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a control step of controlling a drive of a wavelength selection element so as to have the oscillation wavelength be the target value and oscillating the laser beam without emitting a test laser beam to output the laser beam externally of the apparatus, when the difference does not exceed the predetermined value.

31. (New) A method of controlling a laser oscillation apparatus, said method comprising:

a decision step of deciding a target value of an oscillation wavelength;

a determination step of determining whether an idle time for stopping an oscillation exceeds a predetermined value; and

a control step of controlling a drive of a wavelength selection element so as to have the oscillation wavelength be the target value and oscillating the laser beam without

emitting a test laser beam to output the laser beam externally of the apparatus, when the idle time does not exceed the predetermined value.

32. (New) An exposure method of exposing a substrate with a laser beam from a laser oscillation apparatus, said method comprising:

a monitoring step of monitoring a wavelength of a laser beam;

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a decision step of deciding a target value of an oscillation wavelength of the laser oscillation apparatus;

a determination step of determining whether a difference between the wavelength and the target value exceeds a predetermined value; and

a control step of controlling a drive of a wavelength selection element of the laser oscillation apparatus so as to have the oscillation wavelength be the target value and causing the laser oscillation apparatus to oscillate the laser beam without emitting a test laser beam to expose the substrate with the laser beam, when the difference does not exceed the predetermined value.

33. (New) An exposure method of exposing a substrate with a laser beam from a laser oscillation apparatus, said method comprising:

a decision step of deciding a target value of an oscillation wavelength of said laser oscillation apparatus;

a determination step of determining whether an idle time for stopping an oscillation exceeds a predetermined value; and

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a control step of controlling a drive of a wavelength selection element of the laser oscillation apparatus so as to have the oscillation wavelength be the target value and causing the laser oscillation apparatus to oscillate the laser beam without emitting a test laser beam to expose the substrate with the laser beam, when the idle time does not exceed the predetermined value.